

507-3B

77623

2. P45

cop. 2

REPORT OF AERIAL RECONNAISSANCE SURVEY

for

PINE BARK BEETLE INFESTATIONS

in the

PIEDMONT REGION OF SOUTH CAROLINA

SEPTEMBER 1970

by

THE SOUTH CAROLINA STATE COMMISSION OF FORESTRY

S. C. STATE LIBRARY

INTRODUCTION

During the month of September 1970 the South Carolina State Commission of Forestry conducted an aerial reconnaissance survey and subsequent ground survey to detect pine bark beetle activity in the piedmont counties of South Carolina (see Fig. 1). The specific objective of this survey was to delineate such bark beetle activity, and in particular that of the southern pine beetle, for additional followup detection, evaluation, and suppression surveys as required.

SURVEY METHODS AND TECHNIQUES

An aerial sketch map method using county road maps was employed to track and record data. Flight lines were spaced at ten mile intervals with the observer recording data for one mile on his side of the aircraft to achieve ten percent survey coverage. Flight lines were flown in due east-west directions.

The survey crew consisted of one pilot, one tracker, and one observer.

SURVEY RESULTS

A total of 241 single tree spots and 213 multiple tree spots were recorded during the survey. Of 35 spots ground checked, only 1 contained active southern pine beetle (3 tree spot in lower Union County). The remaining 34 spots sampled were the result of attacks by pine engravers (*Ips* spp.). Black turpentine beetles were associated with most of the *Ips* spots as secondary agents.

The largest spot recorded contained 75 trees and was located in lower Lexington County. The survey indicated isolated areas of build-up of pine engravers in the following locations:

- (1) The Sumter National Forest - Tyger and Enoree Districts in eastern Chester and Fairfield Counties and the southern portion of Union County.
- (2) Upper Fairfield County - Near the vicinity of the town of Woodward which is located on U. S. Hwy. No. 321 approximately halfway between Winnsboro and Chester, S. C.
- (3) Central Newberry County - In the vicinity of the towns of Prosperity, Silverstreet, and Newberry, S. C.

The aerial survey encompassed 5,964,000 gross acres, 2,982,000 of which were ground checked (see Table 1).

DISCUSSION

The results of the survey indicate an extremely endemic southern pine beetle population exists throughout the entire survey area, populations being almost nonexistent.

Lightning, damage associated with intensive logging practices, and drought were suspected to be the primary agents responsible for the pine engraver build-up in localized regions in the aforementioned counties.

Due to the absence of multiple spots containing large numbers of trees (particularly faders) and the apparent low southern pine beetle populations, aerial surveys for the purposes of evaluation and control (timber salvage) are not deemed necessary during 1970.

Aerial Reconnaissance Survey (cont'd)

The next regularly scheduled aerial reconnaissance flight for southern pine beetle will be conducted in July 1971, or prior to this date as field detection notifications necessitate the need for such.

RECOMMENDATIONS

- (1) It is recommended that beetle infested trees and other salvagable materials be salvaged when accessibility, volume and markets are sufficient to warrant the economic feasibility of such an operation.
 - (2) The South Carolina State Commission of Forestry should be notified immediately of any adverse change in bark beetle activity, particularly the southern pine beetle.
-

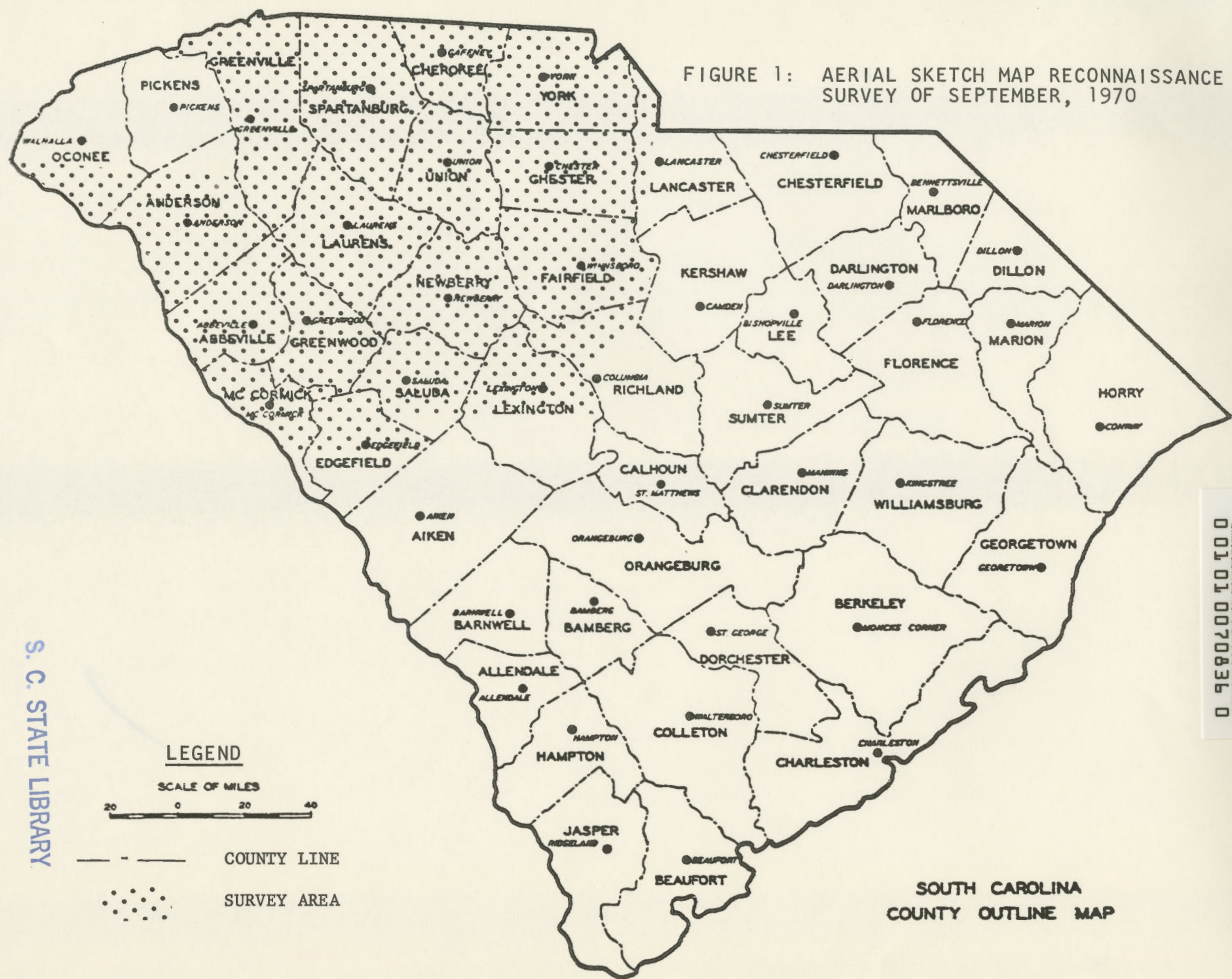
For additional information on this survey please contact:

Management Assistant
Forest Insect and Disease Control
S. C. State Commission of Forestry
P. O. Box 287
Columbia, S. C. 29202

TABLE 1.--- SURVEY AREA
by
LAND CLASS AND COUNTY

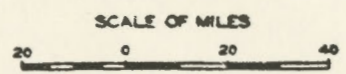
<u>COUNTY</u>	<u>GROSS</u>	<u>FOREST LAND</u>
	<u>Thousand acres</u>	
Abbeville	324.5	212.5
Anderson	458.3	197.2
Cherokee	252.2	134.7
Chester	374.4	271.2
Edgefield	153.9	115.1
Fairfield	447.4	386.3
Greenville	504.9	280.6
Greenwood	286.1	212.9
Lancaster	44.7	9.3
Laurens	448.6	290.1
Lexington	226.6	132.3
McCormick	209.6	192.2
Newberry	407.0	320.3
Oconee	140.7	112.0
Richland	159.6	113.5
Saluda	226.3	133.0
Spartanburg	531.2	263.8
Union	329.6	251.8
York	<u>438.4</u>	<u>264.1</u>
TOTAL	5,964.0	3,892.9

FIGURE 1: AERIAL SKETCH MAP RECONNAISSANCE SURVEY OF SEPTEMBER, 1970



S. C. STATE LIBRARY

LEGEND



- COUNTY LINE
- SURVEY AREA

SOUTH CAROLINA
COUNTY OUTLINE MAP

001010070836 0

SOUTH CAROLINA STATE LIBRARY